



Do you manually clean aircraft parts or engine parts?

Would you like to improve this process in the following areas?

- **Meeting environmental compliance regulations** -- Reduce hazardous waste disposal and air emissions. Applicable regulatory areas include RCRA, NESHAP, and NAAQS.
- **Improving workers' safety and health** -- Reduce exposure to harmful solvents and VOCs.
- **Increasing productivity** -- No change from current operations.
- **Saving money** -- Decrease operational costs, solvent purchases and solvent disposal.



Enzyme Bioremediation Parts Washers

*Traditionally, solvents containing volatile organic compounds (VOCs) have been used in a large number of parts cleaning applications. Use of hazardous solvents can have adverse environmental effects including hazardous waste generation and air emissions. An enzyme bioremediation parts washer can replace traditional solvent use in many parts cleaning and degreasing operations. These manual parts cleaning stations use a neutral mixture of emulsifiers, surface active agents, and safe microbes to break down oil and grease particles. This equipment may require additional maintenance when compared to traditional parts cleaning tanks. The enzyme bioremediation parts washer is being used successfully at NAS North Island and other Navy installations. **This Equipment is available through the Navy Pollution Prevention Equipment Program (PPEP).***

How can you achieve these improvements?

Implement Enzyme Bioremediation Parts Washers.

How does this equipment work?

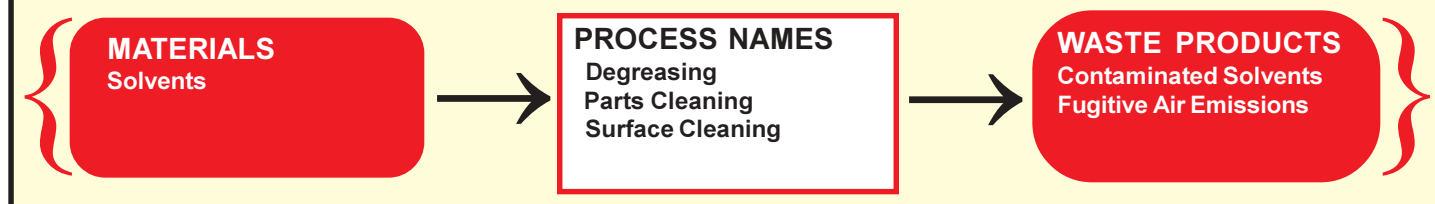
This equipment breaks down oil, grease and dirt in a manual, self-contained system using safe microbes.

How will this equipment save you money?

This parts washer reduces solvent procurement and disposal costs. The cost to implement is approximately \$3,500. The equipment typically pays for itself in less than a year.



Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can eliminate the use of harmful solvents.

Implementation will also result in the following pollution reductions:

- Eliminate Ozone Depleting Substance use in Cleaning Processes
- Eliminate Disposal of Waste Solvent as Hazardous Waste
- Eliminate Air Emissions Related to Solvent Use

Which shops can benefit most from this technology?

This technology can be used in any processes that requires manual cleaning or degreasing of aircraft or vehicle parts. Typical shops include:

- Automotive Maintenance and Repair
- Aircraft & Shipboard Operations and Maintenance
- Facilities Maintenance

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel.** Contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.

- **Activity Pollution Prevention Manager.** Request this equipment through the Navy P2 Equipment Program (PPEP). Depending on the application, the Environmental Program Requirements Cookbook may contain project submission information for annual budget requests sent to your claimant.

- **For Additional Technical Information.** More information about this technology can be found in the PPEP Book (Web: <http://www.lakehurst.navy.mil/p2/index.htm>).

Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

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